cluded from the review. The studies included were categorised based on criteria such as type of study, statistical methods for the learning effect, mathematical framework for the economic analysis, year of publication, country and intervention. **RESULTS:** The database search produced 930 articles. Only 2% of the studies obtained were included given the above criteria. Of the excluded studies, 70% were excluded as they were not economic evaluations and 23% were excluded as they did not formally present the learning effect. The remaining 7% were excluded based on other reasons: duplicates, non-English, non-human. The majority of the studies are published after 2000. Of the included studies, the majority presented a learning effect related to health care costs. Two percent of the included studies referred to utilities. Only one study synthesised cost and utilities. **CONCLUSIONS:** Although the learning effect can have a notable impact on the effectiveness of health care interventions, the economic evaluation literature on the subject is very limited.

PRM12
AN APPLICATION OF A PROPOSED FRAMEWORK FOR FORMULARY LISTING IN LOW-INCOME COUNTRIES: CASE OF CÔTE D'IVOIRE
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OBJECTIVES: The Mutuelle Générale des Fonctionnaires et Agents de l'État de Côte d'Ivoire (MUGEFCI) is a health mutual providing coverage services for its enrolees (medical consultations, lab tests, medication expenses). This organization aims at improving its current drug reimbursement process because of budgetary constraints. This study, therefore, aims at evaluating the feasibility of developing a new formulary for the MUGEFCI in Côte d'Ivoire, by implementing a formulary-listing framework specifically designed for under researched settings. **METHODS:** The application of this framework, based on Multi-criteria Decision Analysis (MCDA), consisted in four steps. First of all, we identified and weighted relevant formulary listing criteria with their levels of variation. Then, we determined a set of priority diagnostic/treatments to be assessed. Furthermore, scores were assigned to these treatments according to their performance on the formulary listing criteria levels. Last, we constructed a composite league table to rank the set of treatments by priority order of reimbursement. A budget impact analysis was also conducted to appraise the economic implications of the new composite drugs league table. **RESULTS:** Policymakers in Côte d'Ivoire consider targeting cost-effectiveness and severity of diseases as the most significant criteria for priority reimbursement of drugs. This translates into a general preference for antimalarial, treatments for asthma and antibiotics for urinary infection. Moreover, the results of the BIA suggest that the new priority list of reimbursable drugs will be affordable when the real economic impact of drugs per patient is under 66 US dollars. Over this threshold, the MUGEFCI will have to select the reimbursable drugs according to their rank in the priority list along with their respective budget impact per patient (cost per patient). **CONCLUSIONS:** It is feasible to use MCDA to establish a formulary for low-income countries. The application of this method is a step forward to transparency in policymaking.

PRM13
ASSESSING THE METHODS FOR SYSTEMATIC REVIEWS OF ECONOMIC EVALUATIONS
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OBJECTIVES: Robust and explicit methods to conduct systematic reviews of economic evaluations are required to guarantee quality of reviews and their findings. This is especially needed when assessing high resource-consuming topics such as those related to the introduction of new imaging technologies. Our aim is to analyse the methods for systematic reviews of economic evaluations of health technologies. **METHODS:** We carried out a systematic review of methods for systematic reviews of economic evaluations by reading relevant parts of HTA methodological manuals ("manuals") and HTA reports from UK ("reports") in English and Italian at September 2010. **RESULTS:** We identified 27 manuals and 53 potential reports. Among them, 6 and 40 contained relevant information respectively. None of the 6 manuals described the criteria used for the identification or formulation of the methods, or gave guidance on which method to follow. Among the 40 reports included, 38/40 (95%) reports described search strategy and data bases used to identify studies and inclusion criteria were presented in 21/40 (53%) reports. The reports did not use a study quality assessment instrument were 9/40 (22.5%) while 20 different instruments were identified in the remaining reports. No report carried out a quantitative synthesis of the data from the systematic review and 9/40 reports (22.5%) clearly stated this. The reports that appear to include the data selectively in their economic evaluation were 13/40 (32.5%). **CONCLUSIONS:** The absence of clear methodological guidance in manuals is reflected in the reports. These show unclear rationale, methods and use of data from systematic reviews of economic evaluations.

Research On Methods – Databases & Management Methods

PRM14
MONDRIAAN: A DUTCH 'POPULATION' LABORATORY
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OBJECTIVES: Many excellent health care databases are available in The Netherlands for (pharmaco-)epidemiologic research. However, in isolation these data remain scattered and have limitations with regard to sample sizes and/or detail of the registered information.The objective of Mondriaan is to optimize access to en linkage of routine health care databases in the The Netherlands for (pharmaco-)epidemiologic research. **METHODS:** We have built an ICT infrastructure for collection and linkage of healthcare/research data in The Netherlands. To protect privacy, pseudonimisation and linkage is performed by a trusted third party (TTP). A data catalogue on subject level has been developed to allow queries within the integrated databases to support designing (pharmaco-) epidemiologic studies (incl. sample size calculations, assessment of completeness of data). **RESULTS:** We are able to routinely link all pharmacy records from the National Foundation of Pharmaceutical Statistics (SFK) (n>14,000,000) on a patient base to several routine health care databases such as the Almere Health Care database (n=200,000), the Julius GP Network (n=200,000), and the AGIS claims database (n=1,200,000). Currently we are integrating several other databases in the The Netherlands. **CONCLUSIONS:** The project will deliver a large-scale, high-quality data platform for innovative (pharmaco-)epidemiologic research.

PRM15
THE OUTCOME OF ISPOR EUROPEAN AND INTERNATIONAL CONGRESSES BETWEEN 2005-2009
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OBJECTIVES: Many of the former socialist countries of Central and Eastern Europe (CCEE) joined to the European Union in 2004. The aim of this study is to analyse to outcome of ISPOR European and international congresses between 2005-2009 with a special respect to the activity of CCEE. **METHODS:** We analysed the abstracts presented at the ISPOR European or International cogresses and published in the Value in Health journal between 2005-2009. We performed a database analysis of value in Health journal on the Web of Science (Thomson Reuters) electronic database of scientific publications. Three indicators were selected: author's country, institution (university) and name. **RESULTS:** The top-10 most active countries were (abstract/1 million population): Switzerland (48.3), Wales (31.0), Sweden (26.2), Denmark (25.3), Belgium (25.0), The Netherlands (23.0), England (19.3), Canada (18.3), Scotland (16.0) and Hungary (14.7). Furthermore Slovakia (8.2) was ranked 16th, Czech Republic (5.0) 24th, Poland (4.1) 26th and Serbia (3.3) 29th. The top-10 most active universities were (number of abstracts): Univ So Calif (140), Univ Toronto (107), Univ Washington (100), Ohio State Univ (98), Erasmus Univ & MC (94), Univ Maryland (93), Univ Pécs Hungary (93), Univ York (92), Harvard Univ (89) and McMaster Univ (76). Three more CCEE university were ranked: Med Univ Warsaw from Poland (38), Corvinus Univ Budapest from Hungary (30) and Comenius Univ from Slovakia (27). The most active 10 authors were (number of abstracts): Boncz, I (Hungary, 96), Taieb, C (France, 83), Balkrishnan, R (USA, Ohio, 77), Sebestyén, A (Hungary, 71), Valentine, WJ (Switzerland, 65), Mantovani, LG (Italy, 60), Caro, JJ (USA, MA, 57), Annemans, L (Belgium, 54), Kriszbahcer, I (Hungary, 52), Rejas, J (Spain, 50). **CONCLUSIONS:** Former socialist countries of Central and Eastern Europe (CCEE) showed a significant activity at ISPOR European and International congresses.

Research On Methods – Modeling Methods

PRM16
COVARIANCE STRUCTURES FOR MODELING LONGITUDINAL DATA
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OBJECTIVES: The objective of this analysis is to compare several covariance structures which are used in the modeling of longitudinal data. **METHODS:** A PUBMED search reveals is a steady increase in prospective observational studies over the past five years. Repeated measures models are frequently used to analyze longitudinal data. For the purpose of these comparisons, a series of longitudinal datasets are simulated. In order to facilitate comparisons with applications to longitudinal datasets involving utilities; the dependent variable in the simulation datasets is a continuous variable restricted to the support interval [0, 1]. The predictor variables include a set of categorical and continuous variables, including a time varying covariate. Datasets with four different types of time dependence were compared (no time trend, log time trend, linear trend, exponential trend). Models with the following covariance structures were evaluated: compound symmetry, unstructured, autoregressive, heterogeneous autoregressive, variance components and toeplitz. Model comparisons were based upon Akaike information criteria (AIC) and the Bayesian information criteria (BIC). **RESULTS:** The preferred covariance structures for the dataset without a time trend were heterogeneous autoregressive (AIC) and unstructured (BIC). The preferred covariance structure for the log trend dataset was unstructured (AIC and BIC). The preferred covariance structures for the linear trend dataset were variance components (AIC) and heterogeneous autoregressive (BIC). The preferred covariance structure for the exponential trend dataset was variance components (AIC and BIC). **CONCLUSIONS:** The unstructured covariance matrix is often the default choice for the covariance matrix for longitudinal models. This model has the least number of assumptions and allows for the modeling of each patient individually. However, the unstructured covariance structure requires the most degrees of freedom and in some cases the estimated covariance matrix does not converge. In these cases, covariance structures such as variance components and heterogeneous autoregressive may present attractive options.

PRM17
SUITABILITY OF CLAD-CQR MODELS FOR OBTAINING QALYS
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